

PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference D356 PAT 1156 WO	FOR FURTHER ACTION see Notification of Transmittal of International Search Report (Form PCT/ISA/220) as well as, where applicable, item 5 below.	
International application No. PCT/IB 03/06059	International filing date (day/month/year) 17/12/2003	(Earliest) Priority Date (day/month/year) 18/12/2002
Applicant DIEAU S.A.		

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of 8 sheets.

☒ It is also accompanied by a copy of each prior art document cited in this report.

1. Basis of the report

- a. With regard to the **language**, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ the international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

- b. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international search was carried out on the basis of the sequence listing :

☐ contained in the international application in written form.

☐ filed together with the international application in computer readable form.

☐ furnished subsequently to this Authority in written form.

☐ furnished subsequently to this Authority in computer readable form.

☐ the statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.

☐ the statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished

2. ☐ **Certain claims were found unsearchable** (See Box I).

3. ☐ **Unity of invention is lacking** (see Box II).

4. With regard to the **title**,

☒ the text is approved as submitted by the applicant.

☐ the text has been established by this Authority to read as follows:

5. With regard to the **abstract**,

☐ the text is approved as submitted by the applicant.

☒ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box III. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. The figure of the **drawings** to be published with the abstract is Figure No.

☒ as suggested by the applicant.

☐ because the applicant failed to suggest a figure.

☐ because this figure better characterizes the invention.

1
☐ None of the figures.

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Box III TEXT OF THE ABSTRACT (Continuation of item 5 of the first sheet)

The present invention relates to a fluid cooling system (1), for use in dispensing or distributing a chilled or cooled fluid, comprising a primary heat exchanger system (2), a secondary heat exchanger system (3), a first conduit (9) through which fluid to be cooled or chilled is circulated, and a heat transfer agent (8) for transferring cooling energy to the fluid to be chilled circulating in the first conduit (9), wherein the primary and secondary heat exchanger systems (2,3) are arranged at least partially one inside of another. The invention also relates to cooled fluid dispensers incorporating the fluid cooling system and a methods for sterilization thereof.

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Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:
2. ☐ Claims Nos.:
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☒ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

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International Application No

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A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 F25D31/00 B67D1/08 A61L2/18 A61L2/04

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 F25D B67D A61L

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, PAJ

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	DE 646 207 C (ROBERT BOSCH AKT GES) 12 June 1937 (1937-06-12) page 2, line 109 -page 4, line 114; figures 1-6 ---	1-15
X	US 1 811 215 A (SMITH ADEN E) 23 June 1931 (1931-06-23) page 1, line 68 -page 3, line 24; figures 1-5 ---	1-4, 42
X	DE 17 51 583 A (DEPPENWIESE GERHARD) 29 April 1971 (1971-04-29) page 4, paragraph 3 -page 5, last paragraph; figure --- -/--	1-4



Further documents are listed in the continuation of box C.



Patent family members are listed in annex.

* Special categories of cited documents :

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the international filing date
- *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the international filing date but later than the priority date claimed

T later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

X document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

Y document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

G document member of the same patent family

Date of the actual completion of the international search

12 May 2004

Date of mailing of the international search report

21/05/2004

Name and mailing address of the ISA

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International Application No

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X A	EP 0 191 436 A (SIPP SPA) 20 August 1986 (1986-08-20) page 6, paragraph 2 -page 8, last paragraph; figure ----	1,2,7,8, 21,22 12,13,42
X	PATENT ABSTRACTS OF JAPAN vol. 2000, no. 04, 31 August 2000 (2000-08-31) & JP 2000 028249 A (HOSHIZAKI ELECTRIC CO LTD), 28 January 2000 (2000-01-28) abstract ----	1,2,21, 22,42
X A	DE 684 559 C (BOSCH GMBH ROBERT) 30 November 1939 (1939-11-30) page 2, line 64 -page 3, line 80; figure ----	1,2,21, 42 11,27
X	GB 2 213 246 A (IMI CORNELIUS) 9 August 1989 (1989-08-09) page 6, line 7 - line 23; figure 4 ----	1,2,21, 42
A	US 6 442 960 B1 (FOURNIER ERIC ET AL) 3 September 2002 (2002-09-03) cited in the application the whole document ----	1,5,6,8, 10-13, 15,27, 37,38, 41-47, 50,52
A	US 2 342 299 A (PEET GERALD D) 22 February 1944 (1944-02-22) page 1, right-hand column, line 32 -page 4, left-hand column, line 32; figures 1-10 ----	1,23-26
A	GB 2 205 638 A (IMI CORNELIUS) 14 December 1988 (1988-12-14) page 7, line 3 -page 12, line 12; figures 1-4 ----	1,23-26
X Y	US 2 093 839 A (KILLEN JAMES R) 21 September 1937 (1937-09-21) page 2, right-hand column, line 29 -page 4, left-hand column, line 57; figures 2,3 ----	46,48 49
Y	US 6 309 470 B1 (SCHAAL CHRISTIAN ET AL) 30 October 2001 (2001-10-30) examples 1-3 ----	49
A	DE 199 22 084 A (MESSER GRIESHEIM GMBH) 30 November 2000 (2000-11-30) column 1, line 44 -column 8, line 34; figure 1 ----- -/--	46,47, 50,51,53

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. Claims: 1-45

Fluid cooling system having a particular heat transfer disposition and fluid dispenser incorporating such a fluid cooling system

2. Claims: 46-54

Method of sterilization

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International Application No

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 2 988 899 A (GEORGE HERON ANDREW) 20 June 1961 (1961-06-20) column 2, line 28 -column 4, line 13; figures 1-3 ----	51
A	DE 201 18 359 U (IONOX WASSER TECHNOLOGIE GMBH) 21 March 2002 (2002-03-21) ----	
A	US 2 143 961 A (STOCK ANTHONY T) 17 January 1939 (1939-01-17) -----	

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Information on patent family members

International Application No

PCT/IB 03/06059

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
DE 646207	C	12-06-1937	NONE	
US 1811215	A	23-06-1931	NONE	
DE 1751583	A	29-04-1971	DE 1751583 A1	29-04-1971
EP 0191436	A	20-08-1986	IT 1183247 B EP 0191436 A1	15-10-1987 20-08-1986
JP 2000028249	A	28-01-2000	NONE	
DE 684559	C	30-11-1939	NONE	
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US 6442960	B1	03-09-2002	FR 2785600 A1 AT 233714 T AU 6206699 A BR 9915170 A CA 2350662 A1 CN 1106341 B DE 69905748 D1 DE 69905748 T2 EP 1129024 A1 ES 2194514 T3 WO 0027744 A1 FR 2785601 A1	12-05-2000 15-03-2003 29-05-2000 14-08-2001 18-05-2000 23-04-2003 10-04-2003 24-12-2003 05-09-2001 16-11-2003 18-05-2000 12-05-2000
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DE 20118359	U	21-03-2002	DE 20118359 U1	21-03-2002
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